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No. 5

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Change of Address

Please forward changes of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland 20014, giving full name, rank, corps, and old and new addresses.

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Physical Symptoms Masking Depression*

CAPT J. D. Wilson MC USN** and LCDR R. C. Spaulding MC USN**,
Proceedings of the Monthly Staff Meetings of the U. S. Naval Hospital,
NNMC, Bethesda, Md., 1962 - 1963.

This particular subject has been chosen for discussion for two reasons. First, because of the high frequency of depression observed in the practice of medicine, and second, the ability of depression to elude the most careful medical observer who does not keep it in mind as a cause of symptoms.

The classical picture of depression may present itself first in physical and physiologic disturbances of the body, passing unrecognized through the hands of numerous competent physicians, and may terminate in death. Not only is the depressive syndrome unique, but it may present as physical complaints and, therefore, usually is seen first by a general medical physician for diagnosis rather than by the specialist trained in psychiatry.

There are two features of the depressive syndrome which should be mentioned. First of all, the depressive syndrome can occur in all personalities from the so-called normal at one end to the psychoneurotic and psychotic at the other. The manifestations are always the same with the possible exception of schizophrenia where there may be some distortion of the symptoms. There are no essential differences in the symptomatology of depression in a normal individual and that of a psychotic individual except for the duration of the depression. The second feature of the depressive syndrome is that the mood disturbance may not be at all prominent. These two points are essential to the diagnosis of borderline depressive states. The physical symptoms frequently cover up their mood disturbances. The most common symptoms of depression occur in the physiologic sphere.

Insomnia and fatigability are the two symptoms usually seen in some degree in all depressions. The usual story of the sleep disturbance is that the patient reaches bedtime exhausted, sleeps until the early morning hours, then awakens for no apparent reason and is unable to go back to sleep. Other forms of sleep disturbances can occur, but this is the variety usually seen. Insomnia is not to be treated lightly if it follows this classical pattern of depressive sleep disturbance.

Fatigue extends into all of the patient's activities. Even the slightest exertion is apt to leave him worn out and completely tired. He finds himself unable to go up a flight of stairs without feeling exhausted. By the time he

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has done his day's work, he is physically depleted and unable to participate in his usual social activities. No amount of rest seems to relieve this fatigue. It is the most distressing portion of his illness and one that frequently leads the physician into all available channels of organic investigation.

Other physiologic symptoms which are not constant but do occur with great frequency are difficulty in thinking, concentration, and irritability. The patient may describe his thinking difficulty as "blank spells." That, with the patient's general attitude of weariness may lead him to feel that he is "losing my mind." Vague uneasiness and restlessness are frequent complaints. In the genitourinary sphere, depression shows itself physiologically in disturbed menses. Those become irregular as to time of onset, length, and quantity of flow. Not infrequently, the menses stop entirely. That may lead an already frightened woman to consider herself pregnant. Many depressions reveal themselves for the first time in the late thirties or early forties; cessation of menses may be confused with the menopause, and endocrine replacement may be instituted. Also disturbed is the sexual activity. Frigidity in women and impotence for men are sometimes the most disturbing of all symptoms. On superficial examination, the impotence is often mistaken for the cause rather than the result of depression.

Physical symptoms which the patient presents cover the entire body. The patient may complain of backache and weakness of the extremities. Those are far from imaginary. There is a general muscular letdown with the depressed patient. A measurable change occurs in the muscle with lost tone and volume. Headaches are a common complaint, as are "bad taste in the mouth" and "loss of appetite." Anorexia has one striking characteristic. The patient usually states that his appetite is good, but that he feels filled up after a mouthful or two of food. He may describe that as feeling his stomach has shrunk. Constipation may be the presenting symptom. Accompanying the fatigue, the patient complains of a pounding heart and shortness of breath on exertion. Changes in the skin are extremely common. The skin becomes dry, scaly, and unhealthy in appearance. Dermatitis occurs and, when it is present, changes during the course of the depression may be observed externally in the changes of the skin. There may be some disturbance of the blood forming organs. These patients almost invariably suffer from some degree of secondary anemia. That, in the presence of a low gastric acidity usually found, not infrequently leads to extensive antianemic therapy.

Turning to the third sphere in which symptoms occur, the physician comes to the content of thought. A depressed patient or a patient presenting the above mentioned symptoms may be able to carry on with most of his duties and social contacts. He may be able to laugh at jokes. His associates may notice little or nothing new in him until after the suicide when they recall his gradually increasing apathy and his reluctance to participate in the activities which he formerly found enjoyable. The patient may spontaneously describe this variable mood. The period of lightening of the symptoms may be long or short. Not infrequently, cycles develop in which profound depression occurs for 24 to 48 hours, followed by comparative freedom from symptoms for 12 to 48 hours. This leads to another characteristic of depression

commonly spoken of as diurnal variation. The bottom of the aspect of lowering is reached in the early morning hours, usually on first awakening, at a time when all bodily functions are at their lowest ebb. It is at this time of day, in particular, that suicides are frequent. As the day wears on, the patient begins to feel better, and perhaps by evening may have reached his normal level of affect. It is at the time of early morning deep depression that the patient describes himself as awakening more tired than when he went to bed. Whenever this occurs, depression is present regardless of any organic disease.

The content of thought in these patients is characteristic and is based primarily on these new disturbances. The worst possible outcome is predicted for every situation which arises. They are willing to accept as their own responsibility and with a tremendous feeling of guilt whatever may have gone wrong in their environment. They feel unworthy for those about them and express such ideas frequently. Every object and person at which the patient looks indicate clearly his own inadequacy and, thereby, his own guilt.

Also characteristic of the content of thought are the profound preoccupations with physical symptoms. It will be recalled that these patients are worried and feel ill. They recognize that something is wrong. Unless the cause is uncovered quickly, they continue to search about their bodies for something which might be related to the disturbed "bad" feelings. Stomach pain becomes cancer. Constipation means intestinal obstruction. It is probable that the patient feels so ill that he recognizes something must be wrong and that something must be serious. This attitude makes the management of the depressed patient particularly dangerous to those physicians who feel compelled to repeat their laboratory work. Any reinvestigation of complaints in a depressed patient convinces that individual that something is wrong and that the doctor has been concealing something from him.

Which patients should be sent to a psychiatrist? It would be ideal if all could have at least one consultation, and the psychiatrist assist the medical man in drawing up a future program for therapy. Depressions which are severe enough to require medical care, before the age of 25 and after the age of 60, have the most malignant prognosis and should always receive the benefit of trained psychiatric help with the diagnosis and management.

Psychiatric consultation is indicated when the symptoms of any category persist or become more marked under therapy. Persistent or continued depression, objective evidence of increasing tension, increased inability to develop feelings of affection (usually manifest by the physician's sensing that the patient is becoming more inaccessible, withdrawn, and turned in on himself), failure on the part of the patient to disclose suicidal impulses and thoughts, and especially increased preoccupation with the function of his stomach and bowel; these are earmarks of malignant features within the illness which indicate the need for psychiatric consultation and its management.

Therapy with the depressive patient is as varied as its etiology. As elsewhere in medicine, good therapy should aim at the removal of the cause of the depression, rather than at relief of the depression itself. However,

this is more quickly said than done. Often the causes are obscure and elusive. Adequate therapy for all cases would require psychiatric consultation and help for all. This is manifestly impossible at this time. There are no sure rules of therapy in depression, even for psychiatrists. There are, however, certain rules of general management about which one can speak.

The basis of all therapy is diagnosis. The first step in the management of depression is accurate recognition of the syndrome. If you can accept the fact that this emotional disorder can cause severe physical evidence of illness, a long step toward management will be taken. Investigate thoroughly every system and every subjective complaint. Once thorough investigation reveals no organic disease, do not retrace your diagnostic steps. To do so may fix complaints so firmly that months of psychotherapy will fail to dislodge them. If you feel you must repeat studies, prepare the patient for the repetition at the time of the original examination. Avoid surgical investigation of any complaint without firm conviction or evidence that organic disease exists in that particular organ system.

Dissuade yourself that the complaints of the depressed patient are imaginary. The backache of depression is as real as the backaches of ruptured intervertebral disc and just as severe. As the investigation proceeds, do not tell the patient that he has nothing wrong with his back. Explain that the muscles show evidence of disturbed function, but that the cause apparently lies elsewhere. Proceeding gradually, you reach a position in which you can explain that emotional disturbance may cause all the symptoms present. You are then ready for a productive psychiatric referral, or for further investigation of your own into the emotional aspects of the illness.

Avoid forming value judgments about your patient's complaints. Do not sneer at the patient, inwardly or outwardly, for not having organic disease. Avoid telling the patient that he is without organic disease and advising him to "snap out of it." No one can possibly blame a depressed patient for anything as much as the patient blames himself for everything. The advice to "snap out of it" is the final convincing argument in his battle with himself; all along he has known that he was worthless, a burden, and a goldbrick. He is now finally convinced. Strangely enough, depressed patients do quite frequently "just snap out of it" for no apparent reason. Therein lies another therapeutic pitfall.

The course of depression is toward recovery. It is quite likely that all depressions, if left alone by family, friends, business associates, and physicians, would eventually recover. This tendency toward recovery has given rise to many false reports of efficacy in new therapeutic tools. This, then, is the first hopeful therapeutic fact: while depression threatens self-destruction, it also promises spontaneous recovery.

General helpful measures at the command of the medical man are numerous. Reassurance of the patient is provided by careful investigation of his complaints for some explanation of the mechanism by which depression causes symptoms. Acceptance of his illness as honorable, and manifest belief in the sincerity and the severity of his complaints are themselves reassuring to the depressed patient.

Some simplifications of the patient's environment and reduction of the demands on him may give a natural resiliency of his personality an opportunity to resolve the depression. This is the basis of recommending the sea voyage for cure; don't, however, recommend it to a depressed Naval Officer. A talk with the patient's spouse will be needed to introduce the proper therapeutic attitude into the home where the patient spends much of his time. Some re-arrangement of the working hours and the scheduling of active sport or hobby participation are immensely valuable. Those should be undertaken on a prescription basis, leaving nothing to chance, and giving the entire management the medical flavor which it deserves.

Psychotherapy in depression is a risky business, not to be undertaken lightly. Firm friendly listening is the order in allowing the depressed patient to ventilate; not overly kind sympathy. Only enough questions should be asked to direct the patient into talking about those things which disturb him. Such therapeutic interviewing takes time and interest, but repays well in results obtained.

This, then, has been a hasty profile of the depressive syndrome as masked by physical symptoms. You are asked to remember four rules:

1. The syndrome occurs in all gradations of personalities from the normal to the psychotic.
2. The mood disturbances are not necessarily prominent.
3. Symptoms occur in three major spheres: physiological, physical, and content of thought.
4. Keep the diagnosis in mind.

The records were reviewed for calendar years 1958, 1959, and 1960. The following information was obtained from 153 cases which represented the number of diagnosed depressions during those three years.

TABLE I

Presenting Complaints - In Order of Frequency in 153 Diagnosed Depressions

(Calendar Years 1958, 1959, 1960)

* Insomnia	Agitation
* Somatic complaints, preoccupation	Paranoid ideation, projection
Suicidal thoughts, drive, attempt	Alcoholism
Anorexia and weight loss	Depressed mood
Self-depreciation	Withdrawal
	Feelings of inadequacy
	Unusual fatigue

TABLE I (page 7) lists the presenting complaints in their order of frequency. The complaint was not included if it was not present in excess of 20% of patients. The asterisks indicate a percentage in excess of 40%.

TABLE II

Percentage of Depressions Compared
with Total Psychiatric Admissions

1958	6.55%
1959	8.01%
1960	4.43%

TABLE II indicates the percentage of depressions compared with the total psychiatric admissions for the three years under consideration.

* * * * *

Psittacosis and Ornithosis

Karl F. Meyer MD, Professor of Tropical Medicine (Emeritus),
University of California Medical Center.

Although the syndrome of typhoid pneumonia was recognized in groups of human beings exposed to imported parrots in 1879, the name "psittacosis" was first applied in 1896. During 1929 and 1930, the causative agent was identified in the United States, Great Britain, and Germany. At first thought to be a virus, the agent is in reality a large basophilic intracellular parasite, the life cycle of which has recently been described and confirmed by electron microscopy.

The first large outbreak of psittacosis in the New World occurred in Argentina in 1929 when many persons who had attended an exhibition of 5000 parrots came down with the disease. Importation of these birds into the United States was forbidden. Then psittacosis reappeared in California and in certain areas of Europe; this time it was associated with parakeets. As many as 70% to 80% of these birds were found to be infected in California aviaries. At this time, the important discovery was made that infection could be largely inapparent. One parakeet infected four people fatally; it shed the organism for 6 months, and retained infectivity in the liver and spleen for another 3 months. An effective check on spread of the disease was achieved by forbidding release of birds into the trade from aviaries with infection rates of over 20%.

The Faroe Island epidemic then showed that birds other than psittacine could transmit disease; petrels here were the source of highly fatal infections, particularly among pregnant women. In California, racing pigeons were incriminated. The word "ornithosis" was first applied when the writer stumbled over the term psittacosis to describe fatal disease contracted from a pigeon by the father of a physician. During succeeding years, chickens,

ducks, and turkeys have been found in many instances to be heavily infected. Personnel working in processing plants of the poultry industry are particularly likely to become infected during plucking and eviscerating infected birds. High rates of infection have recently been reported from duck processing plants in East Germany and Czechoslovakia. The raising of ducks under insanitary conditions on stagnant ponds may contribute to the high rate of avian infection. In the case of turkeys, sick birds on turkey ranches are not reported but are sent to processing plants; here workers are exposed by aerosol infection to highly infected carcasses with the result that attack rates as high as 80% have been reported among such workers. Aerosol infection results from flinging pounded up fresh carcasses into a rendering plant.

Reduction of the human infection rate from ornithosis or psittacosis may be achieved by two means. First, parakeets may be treated by medicated millet seeds. Where this program has been carried out, the human infection rate has dropped to zero. Also, adequate therapy with tetracycline promptly given controls human infection. It is interesting, however, that under these conditions avirulent strains may persist for months in the soil or bedding frequented by turkeys.

Emphasis of certain clinical features of ornithosis is appropriate:

- (1) There is a slow pulse rate in proportion to the high temperature curve.
- (2) Psittacosis may be transmitted without contact with infected birds, primarily in wards where the true cause of infection has not been recognized. In Argentina, one infected person was the source of 27 other infections; in the Louisiana Bayou infection, originating with egrets, there were 13 deaths out of 19 exposures to one infected person. Chemotherapy would have rendered the patient noninfectious in both instances within 48 hours.
- (3) The infection may persist in an individual for years. One patient known to the writer was treated during a severe attack with convalescent serum; 8 years later the organism could be recovered from his sputum.
- (4) Although the characteristic lesion is a pneumonitis, inapparent infection is much more common, a fact revealed by serologic studies. Dependence on complement fixation for diagnosis is therefore inadvisable; defibrinated blood or even a portion of the clot should be inoculated into a mouse. Such a procedure may be rewarding as late as the tenth day of infection. At autopsy, the heart blood and a section of lung should be collected for study. At least one case showing the clinical picture of Hamman-Rich syndrome has been found to have had psittacosis.

Epidemiologic facts may now be summarized. In certain populations, notably those employed in packing plants, the incidence of inapparent infection is higher than the 10% figure quoted previously; it may be as high as 40% as determined by serologic findings. Among such workers, it is important to have baseline serologies in order to detect reinfection. Immunization can only be carried out with living attenuated agents that make a deep imprint on antibody producing centers with resultant modification of the mononuclear cells to such an extent that they will not permit multiplication of the agent in the cytoplasm. In addition to South and Central American birds, those of the Indonesian Archipelago and Australia, some of which carry Newcastle disease,

must be suspects. Such infected birds may in turn infect finches or canaries in dirty pet shops. Oceanic birds, such as petrels and seagulls, may be infected.

The same agent may even be found in the animal kingdom in sheep, goats, and laboratory animals. To this group of agents, the name *Batsonia* is being applied. Inspection of carcasses from squab or turkey farms may show a plastic exudate over the liver and heart. Some birds show splenic enlargement and necrosis of the liver. This evidence of infection in birds must be sought as a check on possible sources of human infection. Adult pigeons infect the young through regurgitation of crop contents in the process of feeding the young. Infected mites persist in the bedding or grounds of breeding farms. Ducks in Europe and turkeys in America are the commonest sources of infection with ornithosis. Inspection of carcasses in processing plants is essential in control.

* * * * *

Leprosy

Paul Fasal MD, Consultant in Leprosy, U. S. Public Health Service,
Clinical Associate Professor of Dermatology, Stanford University
School of Medicine.

This presentation is based on the study of eighty cases followed at the Leprosy Clinic of the United States Public Health Service Hospital in San Francisco. That the largest single ethnic group seen in the Clinic was Caucasian is noteworthy. Diagnostic difficulties in this disease are formidable and numerous. Advanced cases showing mutilation, deformity, or blindness fit the popular concept of this historically dreaded affliction as depicted in plays, motion pictures, and best sellers.

The majority of cases—especially those seen in the continental United States—are less spectacular and, therefore, less likely to arouse the suspicion of an untrained examiner. One patient, a Caucasian, with some papular lesions on the upper lip and a slight erosion on the right side of the nose, went on (during many hospital admissions for other illnesses during which these lesions were ignored) to develop an obstructing mass in the nose. Histopathologic examination of a biopsy of this mass revealed on acid fast stain swarms of *lepra* bacilli. In lepromatous leprosy, biopsy specimens stained for acid fast organisms are essential in most instances for diagnosis. The affinity of *lepra* bacilli for nerve tissue is another point to be kept in mind. The same section of biopsy material may show intact blood vessels and nerve tissue virtually eaten up by acid fast organisms.

Lesions presenting a difficult differential diagnosis are legion. Biopsy provides clarification. Acne conglobata, trophic ulcer of the foot, indolent lesions of the external ear, neurofibromatosis, circumscribed burns such as may be seen in syringomyelia, sarcoid of the skin, granuloma annulare, lymphomata of the skin, and contracture of a finger as can be seen from a burn—all may be confused with leprosy and vice versa.

Loss of the lateral parts of the eyebrows is an important symptom of lepromatous leprosy. Complete loss of eyebrows and eyelashes and numbness of the extremities are often the only symptoms in a form of leprosy called diffuse lepromatosis. This is common, but not confined to, Mexicans, especially those from the State of Sinaloa. Bacilli can be demonstrated in normal appearing skin. A serious complication of diffuse lepromatosis is the presence of circumscribed areas of necrosis looking like chemical burns and ending in bizarre scars called erythema necroticans or Lucio's Phenomenon.

The material thus far presented concerns lepromatous leprosy. This is the type which can be transmitted, although in the continental United States the chances of transmission are considerably less than in tropical countries. Common sense public health measures have been instituted in cases of active lepromatous leprosy and it is advisable to eliminate contact of such a person with children.

Tuberculoid leprosy—often presenting great diagnostic difficulties—frequently shows hypopigmented macules with central anesthesia. Sometimes there is found an elevated border or small elevated papules looking like lupus vulgaris in the periphery.

Since bacilli are as a rule not present in the skin lesions of tuberculoid leprosy, it is essential to look carefully in the sections for selective nerve involvement away from the original focus of granuloma. Testing of the patient for temperature perception is of great importance. Tuberculoid leprosy can also resemble many dermatoses. The writer has seen patients who were treated as ichthyosis, seborrheic dermatitis, granuloma annulare, sarcoid, and superficial fungus infections. At times, the nerve involvement—which always is present in leprosy—may cause marked thickening of the affected nerve, particularly the ulnar or great auricular nerve.

After the diagnosis has been established by correlation of the clinical picture and histopathologic findings, a lepromin test can be performed to help in establishing the type of leprosy present. This test was evolved by Mitsuda and is also known under the name of the Mitsuda Test. It consists of an intradermal injection of 0.1 cc of a suspension of killed lepra bacilli. Three weeks later, the presence of an infiltrated papule of 6 mm or more in diameter indicates resistance indicative of tuberculoid leprosy. A negative lepromin test indicates lack of resistance denoting lepromatous leprosy. In most cases, however, it is not necessary to perform a lepromin test as correlation of the clinical and histopathologic findings is sufficient to establish the type of the disease. The lepromin test is not a diagnostic test and should not be used before the diagnosis is established.

For active lepromatous disease, initial treatment in a specialized hospital, such as the United States Public Health Service Hospital in Carville, La., is advisable. Cases of lepromatous leprosy after initial hospitalization, inactive cases, and cases of tuberculoid leprosy, can generally be treated on an ambulatory basis. If, however, a patient refuses hospitalization, he must nevertheless be treated on an ambulatory basis or he will go underground.

Sulfones are still in use, but reactions or resistance is often seen. SU 1906, a thiourea compound, can be substituted when the sulfones are not

tolerated or are not effective. Much more basic research is necessary before it will be possible to find more efficient and better tolerated drugs. Recent reports of Shephard about the successful inoculation of lepra bacilli into the foot pads of mice are most encouraging.

Leprosy is just as great an imitator as syphilis. It can occur in any age group and in any ethnic group. It can imitate many skin diseases and must be constantly kept in mind in order not to miss the diagnosis. Histopathologic examination of biopsy material by an experienced observer is essential.

* * * * *

Skin Diseases in the Tropics

Paul Fasal MD, Consultant, Leprosy, U.S. Public Health Service,
Clinical Associate Professor of Dermatology, Stanford University
School of Medicine.

This presentation considered two aspects of skin diseases in the tropics: conditions specific to tropical areas and conditions seen anywhere, but more common to, or having different manifestations in, the tropics.

Chromoblastomycosis is common in South and Central America. This deep fungus infection is characterized by verrucous lesions with a whitish surface as if sprinkled with powdered sugar. Diagnosis is best established by biopsy and histopathologic examination which shows the causative organism, Phialophora verrucosa. Numerous draining sinuses, often over large areas of the body surface, are seen in another deep fungus infection common in Mexico caused by Actinomyces mexicanus.

Rhinoscleroma, showing nasal lesions which can resemble leprosy, syphilis, tuberculosis, squamous cell carcinoma, or deep mycosis, shows on histopathologic examination the characteristic combination of plasma cells, Russell bodies, and large foam cells.

Pinta, in its early stages, may be easily confused with tinea or eczematoid dermatitis common in Mexico; or in later stages, it may show bluish, reddish, or violet erythema and eventual hypopigmentation. Triangular hypopigmented areas on the flexor surface of the wrist with one apex pointing toward the cubita are characteristic. In early stages, dark field examination of serum obtained from scarified skin may show Treponema carateum. On histopathologic examination, a heavy plasma-cellular perivascular infiltrate is seen. Pigmentation of the mucous membrane of the oral cavity distinguishes Addison's disease from pinta.

A triad of eye involvement (conjunctivitis, iritis), skin changes resembling atopic dermatitis, and postauricular or cervical nodes denote onchocerciasis. The nodes often seem completely fibrotic, but sectioning may show adult worms and within the adult worms, microfilariae. Examination of biopsy taken anywhere in the skin will show microfilariae.

Lesions of the ear, especially the earlobe, suggest leprosy, but Giemsa stain of sections may reveal cutaneous leishmaniasis.

Cutaneous tuberculosis is not as rare as generally believed and is ordinarily much more destructive than leprosy. Lupus vulgaris is often characterized by small reddish-brown nodules. Tuberculosis verrucosa cutis shows verrucous lesions healing in the center and progressing in the periphery. Papulo-necrotic tuberculid shows in classic cases papules with central necrosis. Scrofuloderma, usually overlying some deeper tuberculous process, can occasionally cover large areas. Primary tuberculosis of the skin (tuberculous chancre) shows an ulceration with associated palpable lymphatic leading to an affected lymph node.

Discoid lupus erythematosus and lupus erythematosus profundus, especially if affecting the external ear, can simulate leprosy.

Mycosis fungoides and other forms of cutaneous manifestations of lymphoma can clinically be indistinguishable from the nodular type of lepromatous leprosy. Cutaneous leishmaniasis can also assume such a picture.

In a leprosy survey of American Samoa, thickened great auricular nerves suggesting leprosy were found to be a physiologic hyperplasia only occurring in young males, athletically built, who rowed longboats over the breakers. A deformity of the fifth finger in Samoans suggesting leprosy was occasionally caused by poles carried over the shoulder to which loads were attached and which were anchored between the fourth and fifth fingers. Nasal deformities caused by yaws can be mistaken for leprosy.

Hypopigmented lesions common in South Pacific areas are usually some superficial fungus infection, such as tinea versicolor but can also be leprosy.

The importance and necessity of performing biopsies in order to establish a diagnosis cannot be too strongly stressed. The great three—leprosy, syphilis, and tuberculosis—often resemble one another.

NOTE: Since this completes the series of articles from the Tropical Medicine Symposium at USNH Oakland, sincere appreciation is extended to Rear Admiral Cecil L. Andrews MC USN for clearance with each author and permission to publish the series, and to Captain Arthur J. Draper MC USN for a fine editing job from the tape-recorded lectures. Special thanks are also offered to all program participants in this outstanding symposium. The following papers were scheduled but copies are not available for publishing.

Recent Application of Immunologic Techniques in Plague Diagnosis. By Bruce W. Hudson Ph D, Biochemist, San Francisco Field Station, Communicable Disease Center Laboratory, U.S. Public Health Service, Department of Health, Education, and Welfare.

Estimate of Disease Control Capabilities - Summary. By Arthur P. Long MD Dr. P.H., Clinical Professor of Medicine (Environmental), University of California Medical Center, San Francisco, Calif.

—Editor

Biochemistry of Insecticide Resistance

Resistance to insecticides still remains one of the most important obstacles to the control or eradication of the major vector-borne diseases of man. Although alternative methods of vector control are being explored, these have at this time limited application and it seems unlikely that it will ever be possible to dispense entirely with the use of insecticides. In fact, there is only one practical counter-measure to resistance—the replacement of the insecticide currently in use by another of proven effectiveness. The difficulty about this solution is that resistance to new insecticides sometimes develops surprisingly quickly, and resistance to one insecticide not infrequently entails cross-resistance to another.

The chances of finding better ways of combating resistance would be greatly improved if more were known about the mechanisms involved. This demands fundamental studies of insect biochemistry, of the metabolism of insecticides in the insect body, and of the mode of inheritance of the genes responsible for susceptibility and resistance. Unfortunately, far too small a part of the resources available for research on resistance are being devoted to this purpose, and there is not enough cooperation between workers in different disciplines. Dr. K. Van Asperen, Wageningen, Netherlands, one of the research workers most actively engaged in studying the biochemistry of resistance, has recently completed an assignment as a WHO consultant assessing the work at present being done in this field in Canada and the United States. His report will provide WHO with a valuable basis on which to make plans for stimulating further research and for coordinating the work of various groups. A few examples will illustrate the complexity of the problem and the type of research needed.

When the organophosphorus insecticides were first introduced, there were high hopes that resistance to them would develop less readily than to the chlorinated hydrocarbons. However, many instances of resistance have now been reported and some species are resistant both to organophosphorus and to chlorinated hydrocarbon insecticides. This raises the question of how frequent resistance genes to these compounds are in the original wild populations. In some laboratories visited by Dr. Van Asperen it has proved possible to breed houseflies showing high levels of organophosphorus resistance starting from what were believed to be susceptible strains. This would seem to indicate that the genetic factors responsible for resistance are fairly common in these susceptible laboratory strains. If these strains were representative of the wild populations from which they were drawn, the chances of resistance to organophosphorus compounds developing in the field would be rather high and the outlook for the use of these insecticides in practical control programs correspondingly poor. However, there is a possibility that the laboratory strains may have accumulated resistance factors as a result of accidental interbreeding with resistant strains kept in the same laboratory. In this case, the outlook for field programs would be less pessimistic.

Research in Holland and the United States has shown that resistance to organophosphorus insecticides in many field strains of houseflies is due,

in part at least, to a genetic factor manifest as a low level of aliesterase (an enzyme that hydrolyses aliphatic esters and is inhibited by organophosphorus compounds). This factor did not occur in any of the organophosphorus-resistant strains obtained by subjecting a susceptible strain to insecticide pressure in one of the above laboratories. However, such laboratory experiments have to be carried out on a rather limited number of flies, i. e., on a limited gene pool, and the conclusions drawn from them therefore tend to be too optimistic. A better understanding might be obtained by a combined genetical and biochemical approach, i. e., by the isolation and biochemical or physiological characterization of single resistance factors, possibly followed by a study of the correlations between different factors.

Such studies are also likely to provide a better insight into the mechanisms of cross-resistance. For example, resistance to DDT in both houseflies and mosquitoes often seems to be due to the action of a dehydrochlorinase (an enzyme that splits off hydrochloric acid). In an interesting study by one research group, the DDT resistance of an already DDT-resistant population of houseflies increased considerably after five years' treatment with diazinon.

At the end of this period, a high DDT-dehydrochlorinase activity was found, but it is not certain that it was higher than at the start. Since the enzyme is unlikely to be of advantage to the insects when they are subjected to diazinon treatment, it seems more probable that the increase in DDT resistance was due to nonspecific factors, such as decreased absorption. When diazinon pressure was relaxed, resistance to both compounds decreased. However, exposure to DDT in combination with a synergist (WARF) resulted in high resistance to the combination in three generations and to high resistance to diazinon in forty generations. Such findings demand research on the nature and, particularly, the specificity of the resistance factors involved.

The same laboratory is conducting studies on host preference in mosquitoes, using an interesting immunologic technic. Blood taken from the various potential hosts is injected into rabbits and antisera prepared. The engorged mosquitoes are crushed on filter paper soaked in saline; it is then possible to identify the host by challenging the blood spot on the paper with the various antisera. Although this work is not directly related to the biochemistry of resistance, it may provide pointers to improved methods of vector control.

Dr. Van Asperen also visited laboratories studying resistance to carbamates, a group of insecticides completely different in chemical structure from both organophosphorus and chlorinated hydrocarbon insecticides. Nevertheless, cross-resistance between the groups occurs. One finding of particular interest, if confirmed, is that when a strain of mosquito resistant to DDT and dieldrin was exposed to selection pressure with a carbamate, only slight resistance to the carbamate developed while the resistance to DDT and dieldrin decreased. Negative correlations of this type between different insecticides could be extremely important in combating resistance. Nothing is known about the possible mechanisms, however, and in fact little is known about cross resistance. Such phenomena are difficult to understand at the biochemical level.

It will be evident that insecticide resistance is a problem of great complexity and that comparatively little is yet known about the mechanisms involved. Unfortunately, Dr. Van Asperen's tour indicated that research on these questions, far from being stepped up, is in several laboratories being abandoned for other lines of research. It will now, he believed, be the task of WHO to endeavor to reverse this trend.

—WHO Chronicle 18(1):16, January 1964

NOTE: USPHS Supports Long-Term Study on the Fate of Pesticides. The beginning of a 5-year study to determine what happens to pesticides after completing their tasks of killing insects was announced by the U.S. Public Health Service. The research will be undertaken by scientists at Rutgers, the State University of New Jersey located at New Brunswick. A grant of \$196,711 is being made to finance the study for the first year.

Among questions the scientists will attempt to determine is whether a pesticide such as DDT is decomposed in the soil, whether it leaches out of the soil into streams, or whether it is taken up by weeds and food plants. The Rutgers grant, entitled The Fate of Pesticides, will include studies of how pesticides are retained or released in various types of clays and other soils, the interactions between pesticides and soil microorganisms, behavior in water, retention by fish, absorption and accumulation in plants, and the possible formation of tumors or other cellular changes in animals. The work will be coordinated by Dr. Billy Ray Wilson, Chairman of the recently established Bureau of Conservation and Environmental Science at Rutgers University.—DHEW USPHS, 6 February 1964

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AVIATION MEDICINE DIVISION

Powered Torso Harness

There is a need for a multi-actuating shoulder harness system to aid aircrew members in positioning themselves back in their seats despite the possible presence of high accelerations. This system would also be useful for pre-ejection positioning. Such a harness system has been studied at the Aviation Medical Acceleration Laboratory, U.S. Naval Air Development Center, Johnsville, Penna.

This "multi-actuating shoulder harness" is a pair of shoulder straps which can be rolled onto reels by pneumatically powered actuators. (A similar system is in the T2(T2J) and A5(A3J) aircraft without manual provisions.) By means of a manually operated control knob, the pilot or aircrewman can adjust the shoulder straps to obtain proper positioning. The straps can be released manually if they become uncomfortable. Tightening to obtain proper positioning is accomplished automatically on ejection.

After completion of studies on the mechanical characteristics of the harness system, a study was made on the effects of the system on human beings. Four subjects were pulled back into the seat with the harness straps. Subjects proved tolerant to shoulder strap pressures of 350 to 600 psi maintained for 5 seconds. They also were tolerant to the stopping impacts associated with the maximum possible speed of retraction of the harness. Studies are continuing along with the development of this system.—AvMedDiv, BuMed

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MISCELLANY

Service in the Navy - An MD's Evaluation

The Surgeon General recently received the following letter. It is believed the information in that letter will be of interest to all medical officers, and of particular interest to those junior officers who will soon be facing their first tour of active naval service.

"E. C. KENNEY
Rear Admiral MC
Surgeon General, U. S. Navy

6 January 1964

Dear Admiral Kenney,

I deeply appreciate your recent letter concerning my release from active duty. I have seriously considered the Navy as a career for quite a while but, unfortunately, due to personal family reasons, I applied for and was accepted for a civilian residency in Internal Medicine.

From the very beginning, when I left my internship July 1, 1962 and entered the Medical Officers Indoctrination Courses at Newport, up until the time I completed fourteen months destroyer duty aboard the USS JOHN PAUL JONES (DD-932), I have enjoyed the Navy.

Socially, I could never hope to experience the opportunity to travel that I had in the Navy. To be sure I can never really put a price tag on my Mediterranean Cruise, including the dinner party you sponsored in Nice, France at which I had an opportunity to meet you.

Professionally, my tour of duty has given me a sense of self-confidence and clinical judgment that I know I would not have achieved otherwise.

I don't think that any Medical Officer should be denied a tour of sea duty under conditions that exist on a destroyer. I now realize that you don't need a lab and X Ray to treat patients. Added to this is the professional experience of association with the medical specialists I have met in Navy hospitals. These men have all been very helpful and I have profited from their teaching. I include in this rewarding professional association such men as Captain Arentzen who first interviewed me at BuMed and Captain Stoecklein who I have corresponded with on various matters including my personal family problems. I can only hope to develop the professional understanding that these men have shown to me.

In conclusion, although I am not staying on active duty, I have done the next best thing and applied for a billet in the active Reserves. I don't want to lose contact with the Navy and I feel that this is a good avenue to keep open for a possible return to active duty.

Very respectfully,

/s/

ANDREW C. FAZZONE
LT MC USNR"

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PHS Division of Foreign Quarantine Has Fine Record

The United States has marked its 16th consecutive year without an outbreak of smallpox or other quarantinable disease known to have been introduced from abroad, as reported by the Public Health Service. Surgeon General Luther L. Terry commented: "It is reassuring to know that inspection procedures and vaccination requirements for travelers entering the United States are preventing spread of smallpox and the other quarantinable diseases into this country. However, the intercontinental airliner has brought smallpox and the other quarantinable diseases to our doorstep. Thus, at no time has there been a greater need for constant vigilance by quarantine officials at all United States ports of entry or for the maintenance of a high level of immunity against smallpox."

The PHS Division of Foreign Quarantine is responsible for protecting the United States against the importation of disease. Quarantinable diseases, in addition to smallpox, are louse-borne typhus, louse-borne relapsing fever, plague, cholera, and yellow fever. The Division guards 380 seaports in addition to airports and land border points of entry in the United States, its possessions, and Puerto Rico. During the last fiscal year, quarantine officials inspected 32,584 ships, 68,959 aircraft, and examined 36,019,614 international travelers.

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Space and Astronautics Orientation Course

This course has been established to give senior officers of the Navy a better understanding of this new technology, its application to naval warfare, and its important role in national defense. The course is in consonance with the Navy's global mission and emphasizes the significant impact of astronautics on seapower. It is primarily designed for those senior officers who have not had the opportunity to gain knowledge of astronautics and current Space programs. A highlight of the course is a visit to the space vehicle launch and control facilities at Point Arguello Naval Missile Facility and at Vandenberg Air Force Base.

Location: U. S. Naval Missile Center, Point Mugu, Calif.

Duration of Course: Four days (Tuesday - Friday)

Convening Dates of
Course: 21 April 1964
5 May 1964
19 May 1964
2 June 1964
16 June 1964

BUMED Quota: One for each class

Deadline Date to
Apply: Immediately for the 21 April and 5 May courses, and six weeks in advance for the remaining courses.

Eligibility: Rank of Commander and above. TOP SECRET Security Clearance required.

In view of the shortage of travel funds for Fiscal Year 1964, only a limited number of officers can be authorized to attend these courses on travel and per diem orders chargeable against Bureau of Medicine and Surgery funds. Eligible and interested officers who cannot be provided with travel orders to attend at Navy expense may be issued Authorization Orders by their Commanding Officers following confirmation by this Bureau that space is available in each case. Requests should be forwarded in accordance with BUMED INSTRUCTION 1520.8 and comply with the deadline dates indicated above. All requests must indicate that a security clearance of TOP SECRET has been granted to the officer requesting attendance, and if Bachelor Officer's Quarters are desired. —Training Branch, Professional Division, BuMed

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FROM THE NOTE BOOK

Professional Papers for Tri-Service OB-Gyn Seminar. Naval Medical officers intending to submit a paper for consideration for presentation at the next Tri-Service Obstetrics and Gynecology Seminar should have the title and a brief abstract forwarded by 15 May 1964 to:

COL William F. Peterson USAF MC
Chief of Obstetrical and Gynecological Services
U. S. Air Force Hospital
Washington 25, D. C.

The final draft of all papers accepted for presentation at the Seminar must be submitted to COL Peterson on or before 15 August 1964.

—Training Branch, Professional Division, BuMed

Human Factors Specialist Appointed. CAPT William F. Madden MSC USN, Head, Aviation Operational Psychology Branch, has been assigned additional duty as Human Factors Specialist in the Development Planning Division (Op-701), Office of the Deputy Chief of Naval Operations (Development). Special attention is being paid to the early consideration and coordination of Human Factors specifications in the planning of projected weapons systems.

—Operational Psychology Branch, AvMed, BuMed

Navy to Test Personnel in Underwater Sealab. Some time next summer, a Naval officer and three enlisted deep sea divers will spend two to three weeks submerged 190 feet in a Sealab at the bottom of the ocean off Bermuda. This is the first time the Navy has attempted to conduct such a test at this depth. The Navy men will work outside the Sealab in pairs, performing both scientific and engineering tasks. A two-man free-floating submarine will be used for propulsion.

The usual schedule for meals and bedtimes will be kept. However, one man will be on watch 'round-the-clock. The Sealab will be a modified mine float, 10 feet in diameter and 53 feet long. It is self-contained except for electrical power which will be provided from a generator aboard the Navy Large Covered Lighter (YFNB-12), the project ship. The Navy reports that 75% of the earth's surface is covered with ocean water of which 14% is at a depth of 600 feet or less. (Washington, AFPS)

Presidential Proclamation

President Johnson has proclaimed March 1 - 7 as "Save Your Vision Week" to emphasize the importance of eyesight conservation to the American people. The "Save Your Vision" joint resolution approved by the Congress on December 30, 1963 was sponsored by the American Optometric Association which has sponsored the event yearly since 1927. The full Proclamation (reprinted on the next page) appeared in the FEDERAL REGISTER of January 4, 1964.

Proclamation 3567

SAVE YOUR VISION WEEK, 1964

By the President of the United States of America

A Proclamation

WHEREAS blindness is a major and increasing social and economic problem in the United States in spite of the great advances in the last two decades in medical care, vastly improved health and increased longevity of our people; and

WHEREAS visual disorders and defects in our younger population interfere with their proper intellectual, social, and emotional development; and

WHEREAS it is essential to the health of our Nation that our citizens be aware of what is being done and what can be done to control the causes of blindness and visual impairments, and that they avail themselves of opportunities for conserving vision; and

WHEREAS the Congress, by a joint resolution approved December 30, 1963, has requested the President to issue annually a proclamation designating the first week in March of each year as Save Your Vision Week;

NOW THEREFORE, I, LYNDON B. JOHNSON, President of the United States of America, do hereby proclaim the week beginning March 1, 1964, as Save Your Vision Week; and I invite the Governors of the States, the Commonwealth of Puerto Rico, and other areas subject to the jurisdiction of the United States to issue similar proclamations.

I also request the medical and allied health professions, the communications industries, and all interested persons and groups to unite during the designated week in public affirmation of our Nation's effort to conserve the God given and irreplaceable gift of vision.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this 30th day of December in the year of our Lord nineteen hundred and sixty three, and of the Independence of the United States of America the one hundred and eighty-eighth.

SEAL

Lyndon B. Johnson

By the President:

DENTAL**SECTION**Oral Manifestations in Hematologic Disorders

Peter Vogel MD, Mt. Sinai Hospital, New York, N. Y. Oral Surg.,
Oral Med. & Oral Path., 16(1):21-30, January 1963.

Since blood dyscrasias predispose oral mucosa to oral disease, they are of great importance to the dental practitioner. Some of the newer aspects and developments of the blood dyscrasias are presented.

Leukemia. This is probably the most frequent blood dyscrasia first seen by the dentist. It occurs more often in white persons and among people of the upper income group - and seems to be increasing in incidence. Although no cure has as yet been found, survival time can be increased with early recognition and treatment. Oral and throat lesions are the common early manifestations of acute leukemias. Bleeding from the gingival tissue, either spontaneous or with minor trauma, may be the first symptom. Petechiae on the oral mucosa are a common finding. Swelling and ulceration of the gingiva, and often, ulceration of the soft palate and the rest of the pharynx is another complication.

Toxic Effect of Drugs and Other Agents. Many drugs, chemicals, animal and vegetable substances may lead to oral lesions through a deleterious effect on the blood. Symptoms to be aware of are ecchymosis and other bleeding tendencies, pallor and/or jaundice, rash, fever, sore throat, or any ulceration of the mucous membrane.

The list of drugs which may cause blood dyscrasias and the number of cases reported are available on request from the Subcommittee on Blood Dyscrasias of the American Medical Association Council on Drugs.

Other blood disorders with oral lesions similar to those in acute leukemia include agranulocytosis, cyclic neutropenia, and aplastic anemia. Herpes of the mouth and lips may be the first indication of lymphoma (Hodgkin's Disease) since the incidence is several times higher in persons with this disease than in the normal population.

With polycythemia, the lips and tongue will usually show marked congestion, and there may be early gingival bleeding and ulceration, even though there may be a rise in platelets accompanying the rise in red blood cells.

The oral signs in pernicious anemia due to Vitamin B₁₂ deficiency, may be glossitis, smooth tongue with absence of papillae, and loss of pigment in the mouth.

Included in the dysproteinemia group are multiple myeloma and amyloidosis. Bleeding may be first seen in the dentist's office and a large tongue

may be noted.

Patients on long-term anticoagulant therapy will usually need adjustment of the prothrombin time prior to dental surgery. However, the use of Vitamin K preparations when there is no prothrombin deficiency is of no value and serves no purpose.

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Relationship of Dentistry to Cardiology

George E. Burch MD, Nicholas P. DePasquale MD, Dept. of Medicine, Tulane Univ. School of Medicine. American Heart Journal 67(1):99-104, January 1964.

Few people possess and maintain excellent oral hygiene at all times. Thus, it is to be expected that most patients with heart disease have unmet dental needs. In such patients, dental care should be obtained as early as possible. The patient should not be permitted to wait until the cardiac disease has become so serious that dental procedures which would have been innocuous earlier have become hazardous. The cardiologist should insist that the patient with heart disease maintain an excellent state of oral hygiene and dental health. The cardiologist knows the natural history of cardiac disease. He knows, for example, that a patient with coronary artery disease may develop a myocardial infarct at any time. If good dental care is obtained before the development of the myocardial infarct, continued maintenance of dental health should not be difficult. However, if dental problems are allowed to accumulate, restoration of dental health may be impossible. Most dental diseases are curable and should be attended to early when the cardiologist and dentist can elect the proper time and procedures rather than later when they are compelled to institute compromise therapy under adverse medical and dental circumstances and when the dental disease is irreversible.

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Changing Requirements for Sterilization

W. E. Burton DDS, Univ. of California, School of Dentistry, San Francisco, California. J. Pros. Den. 14(1):127-139, January-February, 1964.

Doctor Burton discusses the necessity of insuring proper sterilization to prevent cross-infection of dental patients, dentists, and dental assistants. He covers the type of organisms involved, methods of sterilization, and expansion of the problem due to the growing demand for dental care by more and more patients. He urges that aggressive efforts be made to improve the techniques of sterilization.

Personnel and Professional Notes

Training Available to Group XI, Dental Ratings. Attention is directed to BUMED INSTRUCTION 1510.2D which provides information concerning training available to personnel of Group XI, Dental Ratings.

Technical training and experience are available to all dental technicians, and personnel are encouraged to request assignment to formal courses of instruction.

Statistics reveal that attendance enhances the opportunity for advancement in rating, promotes growth in professional qualifications, and increases general aptitude for the duties of a dental technician.

All Dental Officers are requested to bring this information to the attention of personnel under their direction to insure that they are aware of courses available and the benefits to be derived.

Naval Dental Corps Announces New Extension Course. The Naval Dental Corps announces the availability of another new extension course, Health of Supporting Tissues in Complete Denture Construction —NAVPER 10419. This course, the latest of 12 now offered in the Extension Education Program, was developed by the U.S. Naval Dental School, NNMC, Bethesda, Md.

Reflecting the increased attention being focused on the denture foundation, the two assignments of this course discuss the management of abused tissues and the remounting and equilibration of dentures to secure occlusal harmony and thus prevent further abuse. (A longer extension course, Prosthodontics, Part I - Complete Dentures, which covers other phases of complete denture construction, is also available in the program.)

The course includes a textbook, an assignment book, and 47 slides. The slides provide illustrations of a quality that could not be equaled in print. They may be examined with a pocket viewer or projected onto a screen for detailed study.

The course is conducted by correspondence and is supplied by the Naval Dental School. It is available without charge to all Regular and Reserve dental officers of the Armed Forces and to members of the other Federal dental services. Registration in the course or information about the extension program may be obtained from the Commanding Officer (Code E44), U.S. Naval Dental School, National Naval Medical Center, Bethesda, Md. 20014.

Participation in Local Dental Societies. Five dental officers from the Naval Dental School, Bethesda, Maryland, made presentations to local dental societies during January 1964. CAPT John F. Bucher presented a slide-lecture titled, "The Role of Endodontics in Modern Dental Practice," before the Montgomery-Bucks County Dental Society of Pennsylvania, on 27 January. The Dental Department of the Naval Air Station, Willow Grove, Pennsylvania, hosted the meeting. CAPT W. E. Crolus is the Dental Officer at Naval Air Station, Willow Grove.

LCDR John S. Lindsay gave a lecture on "Therapeutic Agents for Use in General Dental Practice," before the Old Dominion Study Club of Arlington, Virginia on 27 January. The meeting was held at the Park-Arlington Motel, Arlington, Virginia.

Three table clinics were given before the Baltimore County Dental Society at Towson, Maryland on 28 January 1964. CDR Archie D. Echols presented, "Are Your Partial Dentures Showing?" LCDR James D. Enoch discussed, "Porcelain Inlays," and LCDR Alexander D. Sanderson presented, "Occlusal Coordination - A Method of Occlusal Equilibration."

CAPT A. R. Frechette, DC, USN, is Commanding Officer, Naval Dental School, Bethesda, Maryland.

NAS Pensacola Hosts AF Dentists. Forty-five Navy Dental Officers and wives from the Pensacola area entertained thirty-two Air Force Dental Officers and wives from Elgin Air Force Base on Tuesday, 21 January 1964.

The afternoon was spent touring the facilities of the U.S. Naval School of Aviation Medicine. Highlights of the tour were briefings and observation of the Human Disorientation Device and the Slow Rotation Room where experimental investigations into Aerospace Environments are underway.

The Dental Officers were given familiarization rides in the Slow Rotation Room and left with a distinct admiration for the vigorous training programs of our man-in-space endeavors.

Other points of interest visited were the Naval Aviation Museum and U. S. Naval School of Pre-Flight Survival Exhibit.

At the conclusion of the tour, the group enjoyed a no-host social hour and dinner at Mustin Beach Officers Club.

Captain M. F. McAfee, DC, USN, is Dental Officer, Naval Air Station, Pensacola, Florida.

Colonel Edward R. Dixon is Dental Officer, Elgin Air Force Base Hospital.

Invitation to British Dental Association Conference. Two dental officers attached to the Naval Support Activity, London, England, have been invited to participate in the Eighty-Fourth Annual Conference of the British Dental Association to be held June 29 to July 3, 1964, in London, England.

CAPT W. A. Aldridge, DC, USN, will present a table clinic, "The Use of Wax Pliers in Fabricating Crown and Bridge Attachments."

LCDR A. E. Amato, DC, USN, will present an exhibit, "Some Uses of Pins in Restorative Dentistry."

CAPT Charles E. Meyers, DC, USN, is the Dental Officer at the Naval Support Activity, London.

Participation at Puerto Rico Dental Association. LCDR V. R. Tibbetts, DC, USN, of the Naval Station, San Juan, Puerto Rico, presented a table clinic

entitled, "Simplified Method of Constructing Acrylic Jacket Crowns (an office technique)", before the Annual Convention of the Puerto Rico Dental Association held at the Hotel El San Juan from 16 to 19 January 1964, in San Juan, Puerto Rico.

CAPT W. H. Snyder, DC, USN, is the Dental Officer of the Naval Station, San Juan.

Project Handclasp. Project Handclasp is part of the Navy's effort to promote mutual understanding, respect and goodwill through direct person-to-person communication between Americans and citizens of other lands.

Project Handclasp has been an official Navy program since 16 December 1961. The program evolved from the desire of naval personnel to assist people in foreign lands to help themselves to improve the conditions under which they live. Warehouses are maintained and operated in San Diego, California and Norfolk, Virginia to collect and store material until space available transportation can be obtained on Navy combat type ships deploying overseas. Project Handclasp Coordinators are located in major naval stations, naval districts and air stations to render assistance in the program.

Project Handclasp is part of the Navy's effort in promoting goodwill in the military overseas community relations program. It operates in all areas where Navy units operate and visit.

Project Handclasp receives and fulfills specific requests from overseas private and vocational schools for the technical and professional training of people in the less developed countries. In addition, donated supplies and equipment will be forwarded to locations where known needs exist. All such items must be usable and should be unconsigned when forwarded to the Directors. Inquiries as to types and amounts of requested dental equipment, supplies, literature, as well as packaging requirements for trans-oceanic shipment will be answered by the nearest Project Handclasp Director.

The Project Handclasp Directors are: CDR S. J. Miller, USN, West Coast Director, Project Handclasp, c/o Commandant, 11th ND, San Diego 30, California, CDR D. M. Hanson, USN, East Coast Director, Project Handclasp, U. S. Naval Supply Center, Norfolk 11, Virginia.

The Project Handclasp representative in the Office of the Chief of Naval Operations is: CDR J. F. Dow, USN, Project Handclasp Coordinator, OP-06B1, Navy Department, Washington 25, D. C.

Dentists in the Americas

There are only 69 schools of dentistry in North, Central and South America. With the exception of a few schools, the average number of graduates is small, approximately 20. Some schools graduate as few as 5 each year. Utilization of dentists is closely related to the socioeconomic conditions of a country. In Latin America the ratio of dentists to the population is very low, 1.9 per 10,000. The range by country is from 0.4 to 6.1 per 10,000 population, only two countries having 5 or more per 10,000. (PAHO/WHO "Facts on Health Problems", July, 1961).

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PREVENTIVE MEDICINE

Dangerous Drivers

Friesen, Dr. Arnold, and Schube, Purcell G., Safety Review, NAVEXOS P-52, Vol. 20(9): 14-16, in which the article was condensed and printed by permission of the authors.

The driver's personality--particularly his personality defects--has finally emerged as a crucial factor in the safety of the millions who use our highways. Yet, there is an uncertainty in people that makes realistic answers regarding their behavior at the wheel of an automobile difficult to obtain. This variability in a driver cannot be predicted with absolute accuracy, by scientific principles like those used in automotive engineering, highway construction or traffic safety problems. It is important that we discover what general attitudes are helpful or harmful in adjusting the driver to the proper use of his machine in traffic. Motor vehicle departments, universities and medical facilities all over the country are conducting projects in an effort to understand these mental and emotional variables of drivers.

In a University of Colorado School of Medicine project, it was noted that drivers having accidents had:

1. Less capacity for managing or controlling hostility.
2. Excessive self-centeredness and indifference to the rights of others.
3. Excessive preoccupation with fantasy satisfactions.
4. Fearfulness of loss of life and support, and resentment toward persons responsible for depriving them.
5. Less ability to tolerate tension and a need for immediate discharge of their feelings.

Tillman and Hobbs, in a 6-year project in London, Ontario, concluded that a group of high accident drivers was "dominated by fatalistic ideas," and largely concerned with the "material aspects of life, and were resentful of authority," and that these attitudes resulted in a predictable increase in accidents recorded over a 6-year period.

From Harvard School of Public Health, Ross A. McFarland has presented a concept of multiple causation in accidents. His comprehensive triad, the "host" driver, the "agent" vehicle and the "environment," takes account

of all the interacting factors in evaluating an accident. With regard to behavioral characteristics of the driver, he states, "The basic human variables relate to attitudes that underlie the specific behaviors exhibited during driving--attitudes toward traffic, toward the presence of other drivers, toward vehicle laws and regulations, toward enforcement activities and toward society." He continues: "Factors of attitude, personality and adjustment are of greater importance in safe driving than sensory defects, reaction times and psychomotor skills." And, he concludes, "Various tests developed to predict accidents indicate that, so far, such procedures have only limited value."

Morris S. Schulzinger states, "The main psychological elements that increase the probability of accidents in maladjusted persons are anxiety, fear, worry, guilt, hostility, emotional and psychosexual conflicts, early exposure to aggression, over-authoritative parents or parent figures, broken homes, frustration, inadequacies of youth, rejection and fatigue."

Continuing the listing of descriptive behavior patterns will not necessarily contribute to our understanding of why drivers have accidents. However, it is important that these behavior patterns be understood and evaluated in terms of impairment of driving ability and accident-proneness.

The necessity for exercising clinical and practical psychiatric judgment is important because pseudoscientific research projects conducted by unqualified persons have led to a great deal of confusion regarding the importance of various behavior traits. The emotional factors in a given driver cannot be placed in an experimental apparatus and recorded, so that the results can be publicized as factors in the causation of accidents. We must beware of the statistical trap and move into the area of understanding. The problem is far too complex for such a simple and rigid solution. Fletcher D. Woodward, M.D., states, "The doctors need not wait until all the facts are at hand; we can begin the control of accidents in a clinical and practical way. We feel that we now have enough facts, which, if employed, would reduce the deaths and injuries 50 percent or more."

It is necessary to have standards of judgment when an attempt is made to evaluate behavior characteristics. The essential evaluating factors must include a person's philosophy of life. What a man thinks, says and does is an expression of his intrapsychic and interpsychic factors. Paraphrased, a man often drives as he feels, or, "a man drives as he lives," or even, "a man's attitude is reflected by his driving habits." A way of thinking that results in a feeling of belonging, of cooperation with mankind, adjusting to accepted social behavior and consideration for the welfare of others, is essential to good driving. Normal living can promote safe driving.

Philosophy of this nature is not merely a way of looking at life; it is a method of action. It must be effective and square with mental and emotional health. Clinical studies, psychiatric judgments and research data are in agreement that high accident rate drivers often come from broken homes, have been subjected to excessive aggression and authority, demonstrate anti-social behavior, reveal considerable emotional instability and have social contacts which are superficial and often limited in number.

In contrast, the low accident driver identifies himself with the family, belongs to social groups, relates favorably to his work and derives satisfactions from life by the way he lives. A good way of living and safe driving, therefore, go hand in hand.

An understanding of the motivations of the unconscious mind, the mechanisms of control and the avenues of discharge is essential for evaluating driver behavior.

The motivations are often expressed in attitude and action. The attitudes of the driver are based on negative or positive motivations. The driver with negative motivations feels that any kind of driving, short of an accident, "is satisfactory" or rates himself a good driver if he has a "no accident" record. This negative attitude or "defensive driving" is hostile in nature, reveals self-centeredness and implies that the driver is so absorbed with his emotional problems that "he is indifferent and inattentive" to traffic conditions. These negatively motivated attitudes cause many drivers to "become antagonistic, impulsive and develop a loss of the sense of caution."

Drivers with positive motivations feel that safe driving is "the proper thing" to do, that it is morally wrong to violate traffic regulations even when there is no possibility of an accident. The positive motivations for safe driving are evidenced in the driver who feels he is "average," rather than one who considers himself the "best" or "below average" in driving behavior.

For psychological differentiation, automobile drivers may be said to have two types of emotionally motivated accidents; their accidents are either deliberate or unintentional, consciously or unconsciously accomplished. The problem which presents itself is, "Why does the driver want to hit someone or be hit by someone?" Why a driver wants to be involved in an accident requires specific understanding of his motivation and action.

The accident-prone drivers must be recognized as belonging to the same categories as persons who show egocentricity, aggressiveness, anti-social attitudes, irresponsibility, rebellion and often low mentality. They should be recognized as sick people. In this respect we cannot permit a margin for error, however slight. Every accident currently attributed to "driver error" must be treated on the assumption that it was made with conscious or unconscious intent.

A car, in the hands of "sick" or high-accident drivers must be regarded as a weapon, in the same manner as a knife, gun, club or sword. It may be used, consciously or unconsciously, by the driver to kill, mutilate, destroy, eliminate, or declare war on an imaginary enemy. Some drivers commit suicide by using the motor vehicle as a weapon. These accidents may be unconsciously designed and executed without conscious guilt. The automobile, therefore, becomes a socially acceptable method of self-destruction.

When the motivation of the driver is hostile, aggressive, resentful and retaliatory, he may well project feelings of anger onto other drivers, unconsciously precipitating an accident in order to create remorse in hate subjects or objects of frustrated love. Therefore, an angry driver should not be permitted to drive again until he changes his driving behavior. If he fails to do

so, we should stop pampering him with alibis of psychiatric handicaps and suspend his license.

Many hostile, aggressive, resentful and retaliatory drivers, on the other hand, do not have accidents because they are able to control, direct and discharge these feelings in a more acceptable manner. The utilization of judgment, cognition, reality orientation, ego control and toleration prevents many of these angry drivers from having accidents.

The stimulation from environment, attitudes in other drivers, reaction to traffic laws, attitudes of enforcement officers and limitations placed on the driver, often trigger off attitudes, emotions and actions that can be the immediate cause of an accident.

We need an immediate change in the philosophy and attitude of legislators, motor vehicle administrators, law enforcement personnel and judges toward the psychiatric aspects of accidents.

Many courts have "traffic violators' schools," and Detroit has a psychiatric clinic where driver behavior is evaluated. The Detroit court has recognized the highly complex and intangible emotional factors of traffic violators and has proceeded on a realistic basis. "Out of 812 offenders' studies: 244 were judged feeble-minded, borderline or of inferior intelligence; 101 had emotionally unstable personalities; 18 had compulsive disorders; and 7 were affected by senile deterioration." After a psychiatric evaluation has been made by the clinic, a course of action follows: "sick drivers" are given medical, psychiatric or driver-training treatment. Failure to respond results in permanent suspension of the license to drive. A limited-license-granting procedure for persons with psychiatric handicaps is employed.

However, the most essential and immediate need is the removal from cars of drivers who have demonstrated that they are unable to drive safely. The psychiatrist knows that the dangerous drivers are different and distinct. They can be identified, weeded out, declared "sick driver" and referred to a psychiatric clinic. And if every driver is aware that deviate behavior will have serious consequences for him, if every would-be-reckless driver can be made to realize that he cannot win, then the behavior displayed on the highways will be drastically changed for the good, and fewer people will be mutilated or killed.

* * * * *

Malaria

Morbidity and Mortality Wkly Rpt, U. S. Dept. HEW, PHS, CDC, Atlanta, Georgia, Vol. 12, No. 44, 8 Nov. 1963, p. 365-368.

An outbreak of Plasmodium falciparum malaria involving 6 clinical and 3 asymptomatic cases was discovered when the M/V RANBORG, a Norwegian freighter of the Zim line, arrived from West Africa, docking first at Philadelphia, and then at Newark. Aboard the vessel were 37 officers and crew,

2 women and one child. All but 4 of these 40 individuals aboard were Scandinavian. The vessel carried cocoa beans and coffee.

When the M/V RANBORG arrived in Philadelphia on October 19, 2 members of the crew complained of similar symptoms: chills, headache, muscle pains and fever. One complained also of a severe posterior occipital pain. Both men were seen by a physician who came to the ship. Case #4, the more severely ill of the two, continued to experience these symptoms and was hospitalized in Philadelphia on October 21, with an irregularly spiking fever of 103° to 106.8° F. He was initially diagnosed as having viral influenza and was treated with tetracycline.

Case #5 remained aboard the M/V RANBORG on its run to Newark but, by the time of the ship's arrival on the 21st, his symptoms had worsened in severity. On October 23, he was found comatose in his bunk and was rushed to a Newark hospital. At the time of his admission, he was stated to have had a stiff neck. A spinal tap was performed shortly after admission, revealing a protein of 60 mg. percent. No abnormal cell count was noted.

This patient's white blood count was 10,000, and the smear showed a marked shift to the left with 40 band cells. His hematocrit was 47. On physical examination, no papilledema, exudates, or hemorrhages could be demonstrated on funduscopic examination. His spleen could not be palpated. There were slightly increased responses to the deep tendon reflexes, but there was no Babinski sign present. There was no stiff neck noted.

On October 21, another crew member became ill (Case #6). This man experienced symptoms identical to those of his shipmates. On October 24, he, too, became comatose and was hospitalized immediately at the same Newark hospital.

He experienced an irregularly spiking temperature which reached a maximum of 105° F. On physical examination, his neck was supple. The fundi revealed no papilledema, exudates or hemorrhages. There was no splenomegaly. Babinski signs were present, bilaterally. His white blood count was 9,000 with a shift to the left (40 bands). His hemoglobin was 78%. No hemoglobinuria was discovered.

Both cases #5 and #6 were initially diagnosed as viral encephalitis.

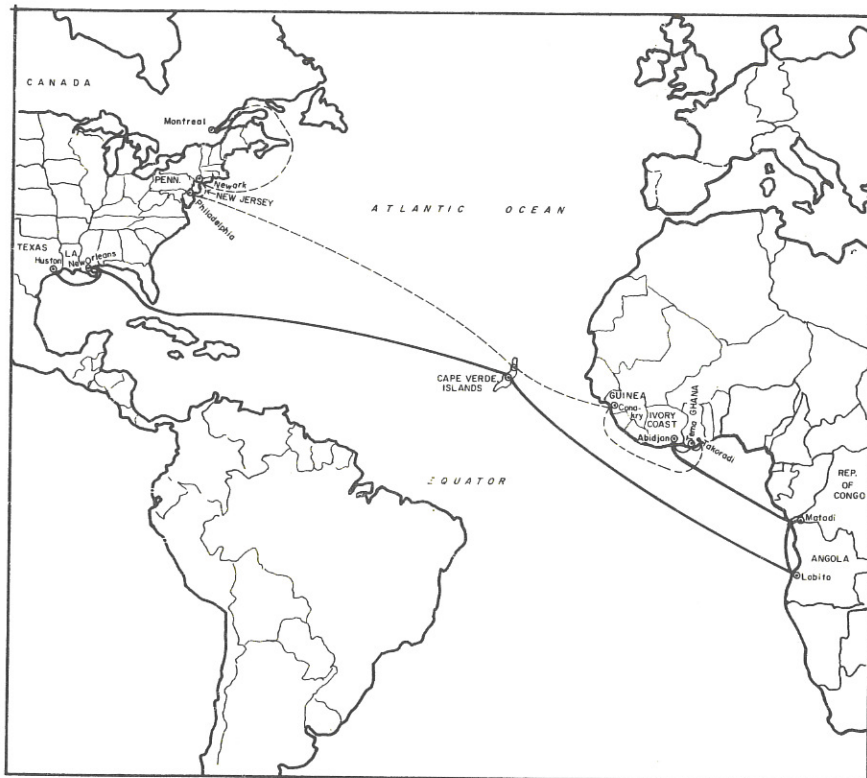
On October 24, on a routine complete blood count performed on Case #5, the laboratory technician noted "funny little things" in the red blood cells, and called them to the attention of the physician. The diagnosis of cerebral malaria became apparent.

At about the same time, October 23, Case #4, hospitalized in Philadelphia, had a positive malaria smear, also. Therapy was changed to Chloroquine phosphate. The same drug was given to Cases #5 and #6 in Newark. All responded.

After the local health authorities were notified, an epidemiological investigation was begun by the New Jersey State Health Department.

A review of the ship's log revealed that the M/V RANBORG sailed from ports in Texas and Louisiana in early August for the West Coast of Africa, arriving at Lobito, Angola, on August 30 (see map). She remained

in port until September 11, when she sailed for Matadi, Republic of Congo, arriving at this Congo River port on September 13, remaining there for 7 days. On September 20, the M/V RANBORG sailed for Abidjan, Ivory Coast, arriving September 24. At this port, she took on coffee beans, and then departed for Takoradi, Ghana. Enroute, the vessel unloaded some cargo at Tema, Ghana. Once in port at Takoradi, the vessel remained for 4 days for loading of cocoa beans. On October 1, she left for Conakry, Guinea, her last African port of call, arriving October 4. She remained 3 days and departed October 7.



In all these ports except Tema, the crew was granted shore leave. At no time were any of the men known to have ventured farther inland than the city limits of the port of call. In all ports, the crew remembers distinctly that there was a heavy infestation of mosquitoes. In fact, mosquitoes were noted aboard ship while in these ports. None of the crew members became ill while in Africa.

On October 9, 2 days out of Conakry, the chief engineer (Case #1) of the M/V RANBORG complained of chills, headache, muscle pains and fever. His symptoms continued intermittently until the 15th. No physician was aboard the freighter during the voyage and, therefore, no smear was taken. The chief engineer recovered spontaneously.

On October 11, the chief steward (Case #2) also complained of chills, headache, muscle pains and fever. His symptoms subsided without benefit

of medical treatment by October 17.

A 54-year-old oiler (Case #3) had a similar onset of symptoms October 12, but these became more severe. His temperature became subnormal for 2 days. He became comatose and died October 17. None aboard suspected the cause of his illness. His body remained aboard ship since it was but 2 days out of Philadelphia. On arrival October 19, the death was reported. The partially decomposed body was removed for autopsy, which revealed on gross examination a cerebral infarct. Microscopic slides are currently being examined.

Notably, 24 of 36 crew members were vaccinated against yellow fever at Lobito, Angola, on September 3. An identical ratio is true of the 9 cases, 6 of whom received this vaccine. The possibility of this outbreak being induced malaria secondary to administration of the yellow fever vaccine appears to be ruled out by an incubation period which would be at the least, 50 days. None of the crew were known to have been tattooed or received other injections.

Prophylactic therapy against malaria had been passively offered to the crew from two days prior to through 7 days following the M/V RANBORG's visit to Africa. Quinine sulfate was available in the mess room during this period of time; however, few took the drug.

The M/V RANBORG was in port at Port Newark when the diagnosis of malaria was first made. At that time, blood smears were taken voluntarily of most crew members. Three of these smears were positive (Cases #7, 8, and 9). Because the M/V RANBORG was scheduled to continue on to Canada without a physician aboard, all remaining crew members were treated with Chloroquine phosphate in a total dosage of 2.5 grams. This drug was administered as follows: 1.0 gram initial dose, 0.5 grams 6 hours later, 0.5 grams the following day, and 0.5 grams on the third day.

EDITOR'S NOTE: * Plasmodium falciparum is the predominant type of malaria along the hyperendemic West Coast of Africa. The 2 chief vectors are Anopheles gambiae and A. Funestus, both of which are widely distributed throughout the region. According to Dr. George MacDonald in his book entitled "The Epidemiology and Control of Malaria," page 77, "A. gambiae is catholic in its choice of breeding place with a bias towards sunlit open pools and A. funestus is associated with vegetated swamps, grassy river-sides and such-like water. Their likes are such that except in dense forest there are few places where one or the other, if not both, are not prevalent."

In Conakry, the edges of the swamps are approximately 6-8 kilometers from the center of the city, but mosquitoes are plentiful within the port area, especially in pocketed sections. Transmission is definitely known to occur within the city.

The data pertaining to the incubation periods suggests one or two cities as the most likely source or sources for the outbreak aboard the M/V RANBORG. The two most likely cities would be Conakry and Takoradi.

Interestingly, the only other malaria fatality recorded up to November, in 1963, was a 28-year-old Norwegian seaman, who worked aboard the MLS

CORNEVILLE, a freighter chartered by a Norwegian shipping line. This victim was dead on arrival at a Norfolk, Virginia, hospital in April. He had been aboard the MLS CORNEVILLE on a voyage from the West Coast of Africa. An autopsy confirmed the presence of malaria parasites in the spleen. The specific type of malaria, however, is not as yet known to the Communicable Disease Center.

Prior to 1963, the last fatal case of falciparum malaria reported to the Communicable Disease Center occurred in 1959. A 47-year-old, white female missionary, who had spent the previous two months in Haiti, became ill shortly after returning to the United States, complaining of persistent diarrhea for more than a week. Then she noted chills and fever and was admitted to the hospital in a semi-delirious state. Her illness was fulminating, characterized by high spiking fever, central nervous system depression, and anemia. A blood smear revealed the presence of P. falciparum and the patient was treated with chloroquine. Despite vigorous therapy, she rapidly went into congestive heart failure complicated by pulmonary edema, hypotension and renal shut-down. Shortly thereafter, she died. Post-mortem examination revealed subendocardial hemorrhage, toxic myocardial degeneration, chronic passive congestion of the liver and spleen, congestion of the lungs, and renal edema. The final diagnosis was falciparum malaria, congestive heart failure, and renal shut-down.

* Refers to Editor of Morbidity and Mortality Wkly Report, cited in credit lines at beginning of article.

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Are Your Agar Plates Seasick?

Conover, J. T. and Sieburth, J. McN., Leveling Device for Preparation of Petri Plates at Sea. J. Bacteriol. 86:1129, Nov. 1963.

If you have ever had the frustration of preparing agar plates aboard a rolling ship, you will appreciate the method developed by two bacteriologists faced with the same problem.

An appropriate sized soft plastic bag (an 8 X 4 X 16 inch plastic freezer bag, poultry size) is half filled with water, sealed, and placed flat on its side in a container (a 10-inch diameter pan--a cake pan or pie dish). A flat metal disc (an 8-inch diameter stove lid) is placed on top of the loosely filled plastic bag equidistant from the edges of the container. The disc is supported free from the pan, and its weight maintains a relatively level surface, with good damping, up to 30° to 40° angles of pitch or roll. A number of small units appear more practical than a large one.

* * * * *



Did you know:

That there were over 100,000 cases of influenza in Kyushu, Southern Japan tentatively identified as a new strain of influenza Type B? (1)

That yaws has been almost completely eradicated from the Fiji Islands (400,000 inhabitants), but there is now an increase in the number of cases of syphilis? (2)

That in Beulah Island, Desha County, Arkansas, the first known anthrax epidemic in deer has been reported?

The first deaths were noted by Arkansas wildlife officials the week of 16 June 1963. A short-term survey made on 20-21 June by Arkansas and Mississippi game and fish officials disclosed 33 dead deer; by 30 June, a total of 67 had been seen. It was estimated that as many as 400 deer died within a 2-week period. The chief reason for the epidemic was believed to be over-population. About 20 acres of wheat planted as food for the deer may have been a contributing factor to the spread of the disease. (3)

That in Central and South America, man may become infested with two species of trypanosomes, Trypanosoma cruzi (Chagas - 1900) and Trypanosoma rangeli (Tejera - 1920)? Similarly, the lower primates, marmosets and monkeys, have been known to be infested with numerous hemoflagellate protozoa resembling these two species.

Primates infected with T. cruzi are known to be imported into the United States from the New World tropics. It is believed that it is unlikely that the trypanosoma strains will invade native invertebrates and vertebrates, including man, in this country. On the other hand, laboratory workers should be aware that T. cruzi may occur in these animals. (4)

That as of 30 November 1963, a total of 248 diphtheria cases had occurred in the United States? This total represents the lowest number of cases of diphtheria ever recorded in the U. S. for a comparable period. Louisiana reported 33 cases, the greatest number for any one State in 1963. Georgia, South Carolina, Illinois, Florida, Alabama, and Minnesota each have reported 15 or more cases, or 132 cases. The remaining 116 cases have been reported from 24 States. No diphtheria has been reported in 19 states. (5)

That plague has almost disappeared from nearly all parts of India, but infections in human beings continue to appear in Madras and Mysore States?

A survey of these areas has been made to determine the extent of the problem and to make proposals for its eradication.

In Madras State, Salem District on the Mysore border is highly affected, while in Mysore State, plague remains endemic only in two Districts, Kolar and Mysore, on the Madras border. The environment in both states is similar. The houses provide harborage for rats and consist of multipurpose rooms used for eating, sleeping, grain storage, and even housing of domestic stock. Persons of all ages except the very young are attacked by plague, and women more than men because transmission is in the house. Plague incidence is mainly rural and highest at sowing and harvesting seasons. (6)

That the marriage rate for October 1963 was 5% above the rate for October 1962? For the 12-month periods ending in October, the marriage rate was slightly higher (2%) in 1963 than in 1962. The rising birth rates of the years 1940 through 1943 are now contributing to the expansion of the population at the peak marriage ages and this may account for much of the increase. (7)

That sparganosis is a little known cestode infection of man, and is found in the muscles or subcutaneous connective tissues? The mature worm, belonging to the genus Spirometra, is a parasite of cats in the United States. The first intermediate host is a copepod (minute crustacean animal) and the second a frog, snake, mouse, or amphibious mammal. The plerocercoid (a wormlike larva with an invaginated scolex at one end) was named "sparganum" before the adult form was known. Human infections have been found in most parts of the world but are most common in the Far East.

In the United States, the disease is usually confined to the southern portion of the country, but cases may occur in other parts of the U.S. (8)

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Plague - Arizona

DHEW PHS Morbidity and Mortality Wkly Rpt, Vol 12, No. 50:421-23

A case of bubonic plague occurred in a 28-year-old male, Indian sheepherder, who resided in Houck, Arizona. He died in the Gallup, New Mexico, Indian hospital, December 7.

On December 1 the patient had killed and skinned a wild rabbit near his home in eastern Arizona. He fed the rabbit to his dog. Four days later he experienced the onset of fever, malaise, and generalized toxicity. He was admitted to the Gallup Indian Hospital on December 7. On admission to the hospital, a large node, believed to be a bubo clinically, was discovered in his left axilla. He died 5 hours after admission.

Blood cultures taken both before and after death have yielded Pasteurella pestis. Mice, which had been injected with his blood samples, died quickly. The diagnosis was confirmed by fluorescent antibody study, agglutinations and hemorrhagic lesions in guinea pigs considered typical for P. pestis, at the U.S. Public Health Service Plague Laboratory in San Francisco. P. pestis has been confirmed on culture at the New Mexico Public Health Laboratory.

There are no additional cases of suspected plague in Arizona. Further field investigations are in progress. This is the first case of plague reported in the United States During 1963. It is also the first case since July and August 1961, when 3 cases were reported from New Mexico.

In the past 30 years, 36 cases of plague have been officially reported in the United States. California has reported 15, New Mexico 12, and Arizona 2 of these cases. Two cases were reported by Utah, and one case each by Idaho, Maryland, Nevada, Oregon, and Texas.

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RESERVE**SECTION**American College of Surgeons Meeting

A sectional meeting of the American College of Surgeons will be held in New Orleans, Louisiana, at the Roosevelt Hotel, during the period 16 to 19 March 1964. Naval Reserve Medical Department officers who attend approved sessions of this meeting are authorized to be granted one retirement point per day, provided they register their attendance at the registration desk for Naval Reservists.

* * * * *

ATTENTION: Reserve Nurse Corps Officers
on inactive duty

This is an excellent time for you to return to active duty if you are qualified and interested. We have vacancies due to normal attrition and increasing numbers for voluntary retirements. If you hold the rank of Lieutenant Junior Grade or Lieutenant and could complete 20 years of active duty before reaching age 55, you may apply. Application for recall to active duty NavPers 2929 may be obtained at the nearest naval recruiting station.

* * * * *

New Regulations for Travel Time, Reporting Dates,
and Detachment Dates for Active Duty for Training

In order to improve utilization of training funds the policy concerning reporting and detachment of Naval Reservists on annual active duty for training has been changed.

It has been Navy policy to issue active duty for training orders for 14 days as an annual requirement. However, the training often does not begin until the day following reporting, and ends the day prior to detachment. The Comptroller General has determined that unwarranted expenditures of funds result when individuals are paid for time spent awaiting the beginning of training and awaiting detachment after training has been completed. Accordingly, a substantial reduction has been made in the amount of money available for active duty for training.

The new Catalogue of Active Duty for Training for Naval Reserve Personnel will contain the following:

1. Reporting instructions contained throughout this catalog are modified as follows:
 - a. For courses where no specific reporting instructions are provided, continue issuing orders directing personnel to report to the CO/OIC of the training activity prior to 1600 on the day preceding the convening date.
 - b. Disregard all instructions to report by telephone to a duty officer, or other officer, on a Saturday or Sunday. Where such instructions exist herein, personnel will be directed to report to the appropriate military personnel office, or other office, at 0800 on a Monday.
 - c. Disregard all instructions to report in person on a Saturday or Sunday where the ACDUTRA consists of "on-the-job" training in bureaus and offices of the Navy Department, in Naval Districts and CNARESTRA activities and in other commands, including on-the-job training in mobilization billets. In those cases, personnel will be ordered to report directly to the appropriate office at 0800 on a Monday.

NOTE: In granting individual ACDUTRA quotas for "on-the-job" training, activities will specify Monday reporting dates.

- d. Continue to observe all other reporting instructions as printed

throughout the catalog, unless they are specifically modified by BUPERS, the cognizant sponsoring Bureau, the training activity or other cognizant authority.

In a further effort to conserve training funds a method of computing allowed travel time for Reservists performing active duty for training for thirty days or less has been changed as follows: Travel time to and from active duty for training is now required to be computed on the basis of constructive air travel, not to exceed one day each way, except when air transportation is not reasonably available. Previously, travel time was allowable based on common carrier schedules via public surface transportation unless the travel was performed by air. The Comptroller General of the United States has recommended that active duty for training for Reserve personnel be limited to the number of days required to carry out the planned training plus travel time by the most economical mode of transportation available.

The foregoing information is contained in BUPERS NOTICE 1571 of 29 January 1964 and SECNAV NOTICE 7220 of 27 December 1963. Reservists planning for active duty for training are urged to check carefully the reporting and detachment dates, and travel time provisions relating to their ACDUTRA. Additional information may be obtained from the nearest Naval Reserve Training Center.

* * * * *

Navy Ensign 1915 Medical Program (continued)

Questions and Answers (continued)

9. May a Naval Reservist, other than an Ensign 1915, who is a medical student participate in Naval Reserve inactive duty training or perform active duty for training?

No. Such individuals are required to change their status by applying for and accepting appointment as Ensign 1915. Those who fail to do so are ineligible to participate in active duty for training or inactive duty training (drills). Retention of a Naval Reserve status which is incompatible with that of a medical student also jeopardizes the deferment from military service which is granted to medical students.

10. Will a veteran with previous active service who has no military obligation be required to serve 3 years active duty when he becomes a physician if he participated in the Senior Medical Student Program?

Yes. Participation in the Senior Medical Student Program imposes a 1 year obligation in return for the financial support. This is in addition to any other obligation imposed by law or contract. Normal contracts for active duty for both veterans and nonveterans are for 2 years; there-

fore, the 3 years of active service must be served regardless of previous service. The Senior Medical Student Program was developed and is authorized as a career incentive program to strengthen the Medical Corps of the Regular Navy.

11. If I become an Ensign 1915, U. S. Naval Reserve Officer, am I furnished uniforms?

Yes. Uniforms are furnished in the form of a money allowance payable to the individual in an initial amount of \$200 providing he completes not less than 14 days active duty or active duty for training, excluding travel time, which requires the wearing of the uniform. An additional active duty uniform allowance of \$100 is authorized for Naval Reserve officers who enter on active duty or active duty for training for a continuous period of more than 90 days duration at a location where uniforms are required to be worn.

(To be continued)

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